hierarchy, or independent images may be arranged in a hierarchical manner, and subsequently rendered using a hierarchy of wavelet decoding schemes. The hierarchy can be developed at a remote site, and a hierarchical wavelet encoding can be transmitted to a local site, so that the hierarchical foveation effect can be rendered while the details of the lower levels of the hierarchy are being communicated.

20 Claims, 20 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 10

---------- KWIC ---------

Detailed Description Text - DETX (10):

FIG. 4, lines 4A-4D illustrate example timing diagrams of hierarchical progressively finer resolution renderings at each of four levels of an image hierarchy. For ease of reference, the term sub-**image** is used hereinafter to refer to the portions of the overall **image that is displayed** in the aforementioned **partitioned** regions of the **display**. Line 4A illustrates the resolution of the primary sub-image, the sub-image that is rendered in the aforementioned primary, or focal, region, such as region 310 in FIG. 3. Typically, there will be one primary sub-image and one primary region that serves as the focal point, although multiple

US-PAT-NO: 5894333

DOCUMENT-IDENTIFIER: US 5894333 A

TITLE: Representative image display method, representative image display apparatus, and motion image search appratus employing the representative image display apparatus

DATE-ISSUED: April 13, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Kanda; Junshiro	Tokyo	N/A	N/A	JP
Abe; Hironobu	Tokyo	N/A	N/A	JP
Wakimoto; Koji	Tokyo	N/A	N/A	JP

APPL-NO: 08/ 671919

DATE FILED: June 27, 1996

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	APPL-DATE
JP	8-014108	January 30, 1996

US-CL-CURRENT: 348/597, 348/564 , 348/700

ABSTRACT:

A video. source, such as a VCR, plays back a

motion image which is input by
an image input section. Partition of scenes and creation of images
representing scenes are performed by a catalog creation section. Additionally,
at this time, an image representing the movement of an object appearing in the
scenes is created. A representative image and a motion description image are
initially stored in a catalog storage section and then displayed in catalog
form by a display section under control of a display control section. Since
not only the representative image of scenes but also the movement of the object
in those scenes are displayed, the contents of the scenes are easily grasped.

13 Claims, 14 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 9

---------- KWIC ---------

Brief Summary Text - BSTX (16):
On the other hand, the representative image **display** apparatus of the
invention includes an image input section which inputs and stores a motion
image comprising a sequence of multiple images, a scene **partition** section which
analyzes the input motion image, detects scene transition points, and
partitions the motion image into scenes, a representative image selection
section which selects a proper image as the

representative image from among the images comprising each scene, a **change** information hold section which detects **changes** occurring in an object within a scene, and associates and holds the information concerning the **change** for every scene with the representative image of the corresponding scene, and a **display** control section which combines and **displays** a representative image of at least one scene with the **change** information that was associated with the representative image.

US-PAT-NO: 6330653

DOCUMENT-IDENTIFIER: US 6330653 B1
See image for Certificate of Correction

TITLE: Manipulation of virtual and live computer storage device partitions

DATE-ISSUED: December 11, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Murray; Golden E.	Mapleton	UT	N/A	N/A
Marsh; David I.	Orem	UT	N/A	N/A
Raymond; Robert S.	Orem	UT	N/A	N/A
Millett; Troy	Lindon	UT	N/A	N/A
Janis; Damon	Katy	TX	N/A	N/A
Marsh; Russell J.	Lindon	UT	N/A	N/A
Madden; Paul E.	Orem	UT	N/A	N/A

APPL-NO: 09/ 302748

DATE FILED: April 30, 1999

PARENT-CASE:

RELATED APPLICATIONS

This application builds on and incorporates by reference the disclosure in

commonly owned copending provisional patent application Ser. No. 60/083,982, filed May 1, 1998 ("the '982 application"). This application also builds on and incorporates by reference the disclosure in commonly owned copending provisional patent application Ser. No. 60/090,213, filed Jun. 22, 1998 ("the '213 application").

US-CL-CURRENT: 711/173, 711/112 , 711/6

ABSTRACT:

The present invention provides tools and techniques for manipulating virtual partitions in a virtual engine environment without necessarily committing each partition manipulation by actually modifying on-disk system structures. A virtual engine, virtual partitions, virtual drives, and other structures in the virtual engine environment permit users to experiment with different partition manipulations in a safe and efficient manner. A batch manager manages a resulting list of partition manipulation operations, which may be optimized. The batch list may also be executed automatically by a conventional partition manipulation engine without requiring additional user input at the end of each list entry. The present invention also provides the ability to manipulate extended partitions automatically and provides support for remote partition manipulation through a two-part user interface architecture.

106 Claims, 8 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 5

---------- KWIC ---------

Detailed Description Text - DETX (98):
It will be appreciated from the information provided throughout this
document that the simulating step may include simulated **partition** 404 creation
(creating a simulated logical **partition** 404, a simulated primary **partition** 404,
and/or a simulated extended **partition** 404); simulated **partition** 404 formatting;
simulated **partition** 404 replication; simulated **partition** 404 deletion;
simulated **partition** 404 resizing by **changing** the number of sectors in the
simulated **partition** 404; simulated **partition** 404 resizing by **changing** the
cluster **size** of the simulated **partition** 404; simulated **partition** 404 resizing
by **changing the size** of a simulated extended **partition** 404 in connection with
resizing a simulated logical **partition** 404 within that simulated extended
partition 404 so that the extended **partition** 404 continues to properly contain
the logical **partition** 404; simulated **partition** 404 resizing by expanding a
simulated extended **partition** 404 into free space that is obtained by
manipulating another simulated **partition** 404 outside the simulated extended
partition 404; **changing** the root directory **size** of

a simulated **partition** 404;
renaming a simulated **partition** 404; simulated **partition** 404 conversion by **changing** the file system type of the simulated **partition** 404, such as conversion between FAT16 and FAT32 file system formats, and possibly thereafter **displaying** 504 an indication of the simulated **partition's** free space and/or used space after the conversion; **changing** the hidden status of a simulated **partition** 404; and/or **changing** the active status of a simulated **partition** 404.

US-PAT-NO: 6404444

DOCUMENT-IDENTIFIER: US 6404444 B1
See image for Certificate of Correction

TITLE: Method and apparatus for displaying and controlling allocation of resource in a data processing system

DATE-ISSUED: June 11, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Johnston; Keith Barker	Austin	TX	N/A	N/A
Kinnison; Stephen Leroy	Leander	TX	N/A	N/A
Lentz; James Lee	Austin	TX	N/A	N/A

APPL-NO: 09/ 310911

DATE FILED: May 13, 1999

US-CL-CURRENT: 345/839, 345/440 , 345/440.2 , 345/966

ABSTRACT:

A method and apparatus in a data processing system for displaying resource allocation information. Allocations of a resource are identified. A plurality of cylinders is displayed, wherein each cylinder within the plurality of cylinders provides a graphical representation of an

allocation of the resource
relative to other cylinders within the plurality of cylinders.

45 Claims, 21 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 14

---------- KWIC ---------

Detailed Description Text - DETX (36):
With reference now to FIG. 11, a diagram illustrating pseudo code for manipulating or changing allocation of resources is depicted in accordance with a preferred embodiment of the present invention. Section 1100 indicates the highlighting of various phases depending on the position of the pointer. Section 1102 illustrates the instructions used to **change the display of the partition size** based on an increase or decrease of the allocation of resources in a cylinder. The code in section 1102 is that used to actually **change the size of the partition** as illustrated in FIGS. 4A-4C.

US-PAT-NO: 5712995

DOCUMENT-IDENTIFIER: US 5712995 A

TITLE: Non-overlapping tiling apparatus and method for multiple window displays

DATE-ISSUED: January 27, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Cohn; Robert M.	Cambridge	MA	N/A	N/A

APPL-NO: 08/ 530644

DATE FILED: September 20, 1995

US-CL-CURRENT: 345/792

ABSTRACT:

A user interface provides a non-overlapped tiling mechanism for management of windows or panes. The non-overlapped tiling mechanism provides independent manipulation of panes and partitions between panes, and creates arrays of partitions from an array of panes in a tiled area. The partition arrays include whole partitions, segments, and combinations of segments. The various types of partitions can be managed and manipulated to effect resizing, repositioning and adjustment of multiple panes simultaneously. The mechanism

provides free form and arbitrary arrangement of panes in configurations which do not require or necessarily exhibit any particular symmetry, any parent-child relationship, or any other fixed relationship among panes. The mechanism also provides for ad hoc addition, deletion and hiding of panes. Additionally, application regions can be freely associated and displayed with any of the panes, and associations between application regions and panes can be changed.

75 Claims, 52 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 18

---------- KWIC ---------

Detailed Description Text - DETX (90):

In a preferred embodiment, the user can perform partition movement by positioning the mouse over one of the partition pickup regions, selecting the partition with the left mouse button, dragging the partition to new tentative locations with the mouse button held down, and finally, repositioning the partition at the desired location by releasing the mouse button. While being dragged, none of the **partition** locations **change,** but the new **partition** location is drawn on the tiler as a tracking **partition** to give the user feedback. Such tracking partitions are not true partitions in the sense of separating panes,

and no corresponding partition data structures are allocated. Instead, they
are just graphic representations of where the partition being moved would be
placed were the mouse to be released. Rather than allocating and creating
partition data structures 230, tracking **partition display** can be derived from
existing **partitions** by reference to the movement field 362. This movement
amount represents a partition's current location relative to its original
location at the beginning of the partition movement operation.

Detailed Description Text - DETX (229):

User and application preferences, parameters and defaults, can be set and
altered for specific panes, tilers and application configurations. Such values
as tiler **display** features, **partition** widths, **partition** visibility, visibility
of untenanted panes, minimum and maximum pane widths and heights, appearance or
color of **partitions** and pickup regions, pickup region expansion, the use of
title bars and title bar content and formats, can be set and **adjusted** for
specific panes or **partitions**. Additionally, individual pane edges and
partitions may be individually configured for various **display** characteristics.

Detailed Description Text - DETX (232):

Other methods can be used for **displaying,** distinguishing, discriminating
among, selecting and activating co-located **partitions** than those already

described. These could include the use of variously displayed hotspot or pickup regions, popup menus, push buttons, keyboard and mouse button combinations, title bar selection, as well as other user interface devices and mechanisms. Other methods than **partition** movement may be used to effect the movement, sizing and **adjusting** of particular panes. Panes may be directly selected alone or in combination with other panes, and may be directly manipulated, resized, repositioned or adjusted. Mechanisms of the invention may also be used to effect pane movement without resizing, and may be used in non-overlapped interfaces in which gaps between panes are permitted.

US-PAT-NO: 6535644

DOCUMENT-IDENTIFIER: US 6535644 B1

TITLE: Hierarchical foveation based on wavelets

DATE-ISSUED: March 18, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Kurapati; Kaushal	Ossining	NY	N/A	N/A

APPL-NO: 09/ 345340

DATE FILED: July 1, 1999

US-CL-CURRENT: 382/240, **375/240.01** , 382/232 , 382/253

ABSTRACT:

Different images, or sub-images, are rendered at different wavelet decoding rates, the more rapidly decoded wavelets forming a focal region about which less detailed images, or sub-images, are formed. In a preferred embodiment, sets of images or sub-images form levels of a hierarchy, and the wavelet encodings of these images and sub-images are decoded at rates associated with each level of the hierarchy. A single image may be partitioned into sub-images, or regions, that form each level of the

US-PAT-NO: 6469722

DOCUMENT-IDENTIFIER: US 6469722 B1

TITLE: Method and apparatus for executing a function within a composite icon and operating an object thereby

DATE-ISSUED: October 22, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Kinoe; Yohsuke	Yokohama	N/A	N/A	JP
Okamoto; Kohsuke	Sagamihara	N/A	N/A	JP
Muranaka; Naofumi	Yokohama	N/A	N/A	JP
Takemura; Tsukasa	Yokohama	N/A	N/A	JP
Matsuda; Minako	Zama	N/A	N/A	JP
Uchiyama; Norimasa	Yamato	N/A	N/A	JP

APPL-NO: 09/ 240215

DATE FILED: January 29, 1999

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	APPL-DATE
JP	10-018389	January 30, 1998

US-CL-CURRENT: 345/837, 345/808 , 345/810

ABSTRACT:

The present invention is directed to explaining functions with a rich graphical expression even when the number of kinds of functions required for a software increases.

More particularly, a plurality of function areas 201-223 are defined in a composite icon area of the present invention. An appearance image is associated to each function area and, when a mouse pointer comes across a function area, appearance images associated to that function area are displayed as appearance images of a composite icon. A function is also associated to each function area and, when a mouse is clicked on a function area, a function which is associated to that function area is executed. The set of the function area may be changed by changing the size of a composite icon, an operation to switch the group of functions, or selection of an object to be operated upon.

25 Claims, 19 Drawing figures

Exemplary Claim Number: 16

Number of Drawing Sheets: 18

---------- KWIC ---------

Detailed Description Text - DETX (80):

When it is not necessary to **change** the current

division scheme to another one, the frame of the composite function icon is **changed to a size** corresponding to (X3, Y3) and is **displayed (block** 699). Information of the starting point of the icon area and the rate of size change are then updated. It is then determined whether or not the mouse button is depressed (block 701) and the process returns to the top of the flow in FIG. 16 to wait the mouse button being released if the mouse button is depressed. If the mouse button is not depressed (when the mouse button is released), the size change process ends and the process returns to the main flow.

Detailed Description Text - DETX (81):

When it is necessary to **change** the current **division** scheme to another one, the current composite function switching group (the group in which the selected flag 437 is on) and the appearance image of function area number 0 (neutral) corresponding to the **changed division** scheme are retrieved from the composite function table of FIG. 7 and **changed to a size** corresponding to (X3, Y3) for **display (block** 703).

US-PAT-NO: 5652863

DOCUMENT-IDENTIFIER: US 5652863 A

TITLE: Graphical method of media partitioning on a hard disk

DATE-ISSUED: July 29, 1997

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Asensio; Miguel Fernando	Boynton Beach	FL	N/A	N/A
Rodriguez; Pedro C.	Loxahatchee	FL	N/A	N/A
Smith; William Robert	Boca Raton	FL	N/A	N/A
Szarek; Vickie Elaine	Cary	NC	N/A	N/A
Wood; Duane Stephen	Boynton Beach	FL	N/A	N/A

APPL-NO: 08/ 486774

DATE FILED: June 7, 1995

US-CL-CURRENT: 711/173, 345/764 , 713/100

ABSTRACT:

A method of graphical representation of media partitioning and fixed disk
data management utilizes manipulable graphical computer images to represent
hard disk data storage space in a computer. The graphical images are
manipulated by the user to define and position

target installation partitions
and to reposition existing partitions upon a hard disk. A partitioning
subroutine program partitions and/or repartitions the disk according to the
relative position of graphically selected
partitions upon the image of the
disk. The graphic images of the hard disk and the data partitions thereon are
labeled with identifying legends to assist the user in selecting and
manipulating the images.

4 Claims, 2 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 1

---------- KWIC ---------

Detailed Description Text - DETX (3):
Inputs which correspond to the graphical representation and manipulation of
target installation partitions are passed or served to an associated utility
program such as FDISK.TM. of the DOS or OS/2 operating systems automatically
repartitions the disk according to the graphical representation including
partitions in free disk space. To control movement of disk data graphically
represented by selected and moved partitions, programming techniques for
automatically mapping selected pieces of information between storage locations
are described in U.S. Pat. No. 5,095,420, the disclosure of which is
incorporated herein by reference. When the

automatic partitioning and/or repartitioning is completed, the newly created disk **partitions** are also graphically **displayed** by appropriate relocation of dividers 14 on **display** 10. By this method the user can visually and graphically select or **change** the status, type and **size** of hard disk **partitions**.

US-PAT-NO: 5949911

DOCUMENT-IDENTIFIER: US 5949911 A

TITLE: System and method for scalable coding of sparse data sets

DATE-ISSUED: September 7, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Chui; Charles K.	Palo Alto	CA	N/A	N/A
Zhong; Lefan	Palo Alto	CA	N/A	N/A
Yi; Rongxiang	Sunnyvale	CA	N/A	N/A

APPL-NO: 08/ 858035

DATE FILED: May 16, 1997

US-CL-CURRENT: 382/240, 341/79 , **375/240.11** , 382/232

ABSTRACT:

A data encoding system and method successively generates compressed data on a bit plane by bit plane basis, starting with the bit position of the most significant non-zero bit for the node in the data array having the largest absolute value, and then encoding the data in the array for progressively less

significant bits. All the nodes in the data array are represented initially by
blocks of nodes on a block list, and later in the processing by nodes on two
node lists. Whenever a block contains a node whose most significant bit is on
the bit plane currently being processed, the block will be subdivided
recursively until all the nodes in the block whose most significant bit in on
the current bit plane are placed in a node list. Data bits representing an
m.sup.th least significant bit of the block and node values are written to the
compressed data file first, where m is the minimum number of bits required to
represent the node having the largest absolute value in the entire data array
being encoded. Data bits for successively less significant bit planes are
written to the compressed data file until a bit plane stop point is reached.
The bit plane stop point may be predefined, user selected, or procedurally
selected (e.g., in accordance with available bandwidth for transmitting
compressed image data).

30 Claims, 21 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 15

---------- KWIC ---------

Detailed Description Text - DETX (22):
The **block** list LB 142 stores two items for each

data **block: a block** identifier consisting of two values (i,j) indicating the origin of the data **block**, and a value (k) indicating the **height and width** of the data **block**. In one preferred embodiment, **blocks** always have **height and width** both equal to a number of data nodes that is an integer power of 2, 2.sup.k. Each of the node lists, LSN 144 and LLN 146, stores the coordinates of each node represented in those lists.

Detailed Description Text - DETX (93):

Further, the definition of the minimum size data block can be modified to be equal to any predefined number of data values, typically equal to an integer power of 2, and preferably equal to an integer power of 4. Thus, it would be easy to **modify** the encoding method to use minimum **size** data **blocks** of 16 data values by **changing** the decision at step 246 to test for k=2 (instead of k=1), and by generating sixteen output values in the **block** of the method for processing minimum **size** data **blocks**.

Current US Cross Reference Classification - CCXR (2):

375/240.11

sub-images and primary regions may be defined at the upper level of the hierarchy for other applications of this invention. Line 4B illustrates the resolution of the secondary sub-images, corresponding to the regions at the next level of the hierarchy, such as regions 321-324 of FIG. 3. Line 4C illustrates the resolution of the tertiary sub-images, and line 4D illustrates the resolution of the background sub-images, at the last level of the hierarchy. The vertical scale of each line 4A-4D represents the resolution, in terms of the finest feature size that can be rendered at that resolution, consistent with the size of the cells in the regions of FIG. 3. Each of the illustrated steps is a reduction of feature size by half, consistent with the processing of each wavelet difference set W, X, Y and Z of FIG. 2, discussed above. As illustrated, the primary sub-image is processed to provide finer resolutions, at 411, 412, 413, . . . , sooner than the secondary sub-images, at 421, 422, . . . , and sooner than the tertiary sub-images, at 431, and the background sub-images, at 441.

Detailed Description Text - DETX (22):

FIG. 9 illustrates an example block diagram of a hierarchical wavelet processing system in accordance with this invention. The wavelet processing system includes an encoding system 900 and a decoding system 950. A **display partitioner** 910 **partitions a display** area into a plurality of regions, and

provides the parameters associated with the **partitioning** 911 to an **image partitioner** 920. The partition parameters 911 include, for example, the location of the each region on the display, the size of each region, the hierarchy level associated with each region, and the like. The **image partitioner** 920 **partitions an image** 901 into sub-**images** 921 that correspond to the **display partitions** defined by the parameters 911, as discussed above. The sub-images 921 are provided to a wavelet encoder 930 that creates a wavelet encoding 931 for each sub-image 921. Alternatively, multiple **images** 925 can be provided to the wavelet encoder 930, and each of the multiple **images** 925 are encoded by the wavelet encoder 930 to correspond to the **display partitions** to correspond to the **display** parameters 911, as discussed above. Optionally, the individual wavelet encodings 931 can be organized for communication to the decoder 950 in a hierarchical order, as discussed above, by a hierarchical sequencer 940 to provide a hierarchical transmission 941 that is de-sequenced by a hierarchical de-sequencer 960 in the decoder 950.

Claims Text - CLTX (1):

1. An encoder system comprising: a **display partitioner that partitions a display** area into a plurality of regions, each region having associated parameters, and a wavelet encoder that encodes a plurality of sub-**images** to produce a plurality of wavelet encodings in

dependence upon the parameters associated with each region, wherein said wavelet encoder encodes at a first encoding rate at least one of the plurality of sub-**images** to produce a first wavelet having a desired focal point, and wherein said wavelet encoder encodes at least one other of the plurality of sub-**images** at a second encoding rate that differs from the first encoding rate to produce a second wavelet having a corresponding at least one other sub-**image** with respect to said first wavelet.

Claims Text - CLTX (9):

9. A method of encoding an **image** comprising: **partitioning a display** area into a plurality of **partitions**, encoding a plurality of sub-**images** hierarchically into a plurality of wavelet encodings based on the plurality of **partitions** to facilitate a subsequent decoding of the plurality of wavelet encodings at a plurality of decoding rates, wherein a first sub-**image** having a desired focal point of a particular sub-**image** of the plurality of sub-**images** is encoded into a first wavelet at a first encoding rate, and a second sub-**image** is encoded into a second wavelet at a second encoding rate that differs from the first encoding rate with respect to the first wavelet, so that said second wavelet corresponds to the second sub-**image** of the plurality of sub-**images**.

Current US Cross Reference Classification - CCXR (1):

US-PAT-NO: 6243419

DOCUMENT-IDENTIFIER: US 6243419 B1

TITLE: Scheme for detecting captions in coded video data without decoding coded video data

DATE-ISSUED: June 5, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Satou; Takashi	Kanagawa	N/A	N/A	JP
Taniguchi; Yukinobu	Kanagawa	N/A	N/A	JP
Niikura; Yasuhiro	Kanagawa	N/A	N/A	JP
Akutsu; Akihito	Kanagawa	N/A	N/A	JP
Tonomura; Yoshinobu	Kanagawa	N/A	N/A	JP
Hamada; Hiroshi	Kanagawa	N/A	N/A	JP

APPL-NO: 08/ 863840

DATE FILED: May 27, 1997

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	APPL-DATE
JP	P8-131898	May 27, 1996
JP	P8-262826	October 3, 1996
JP	P8-264123	October

4, 1996
JP P8-266019 October
7, 1996

US-CL-CURRENT: 375/240.13

ABSTRACT:

A video caption detection scheme capable of detecting captions from the coded video data which are coded by using a combination of predictive coding and motion compensation, without requiring the decoding of coded video data into frame images. In this video caption detection scheme, whether each pixel/block in the video data is coded by using inter-frame correlation without using motion compensation or not is judged. Then, a region in the video data at which pixels/blocks that is judged as being coded by using inter-frame correlation without using motion compensation are concentrated time-wise and space-wise, is detected as a caption region. The detection can be realized by counting a frequency of appearance of a pixel/block which is judged as being coded by using inter-frame correlation without using motion compensation, at each pixel/block position of a frame over a prescribed counting period, and then comparing the counted frequency of appearance with a prescribed threshold value.

19 Claims, 80 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 48

---------- KWIC ---------

Detailed Description Text - DETX (9):
Also, in the video frame (2), it is possible to **change** a type of coding macro-**block** by macro-**block**. Here, the available types of coding can be classified by the following criteria:

Detailed Description Text - DETX (297):
By means of this video content indication display, the caption existing time section for each type of caption is positioned on the time axis while the frame image corresponding to each caption existing time section is displayed, so that it is possible to provide the video content indication based on the caption type along with the video content indication based on the concrete caption content. For example, by watching the thick lines for indicating the time sections at which the titles appear in the video along with the frame **images displayed** in correspondence to these thick lines, it becomes possible to handle the video in time **divisions** according to the titles by attaching a concrete title to each divided video part.

Claims Text - CLTX (56):
11. The method of claim 10, wherein the determining step determines that the caption exists when an area of a judging region

at which the caption
candidate image has a value "1" is judged as
sufficiently large and a **change** in
said one frame image within the judging region is
judged as sufficiently small,
according to the first number of pixels**/blocks** and
the second number of
pixels**/blocks**.

US-PAT-NO: 6434196

DOCUMENT-IDENTIFIER: US 6434196 B1
See image for Certificate of Correction

TITLE: Method and apparatus for encoding video information

DATE-ISSUED: August 13, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Sethuraman; Sriram	Hightstown	NJ	N/A	N/A
Chiang; Tihao	Plainsboro	NJ	N/A	N/A
Song; Xudong	Princeton	NJ	N/A	N/A
Krishnamurthy; Ravi	Princeton	NJ	N/A	N/A
Hatrack; Paul	Plainsboro	NJ	N/A	N/A
Zhang; Ya-Qin	Cranbury	NJ	N/A	N/A

APPL-NO: 09/ 285582

DATE FILED: April 2, 1999

PARENT-CASE:

This application claims the benefit of U.S. Provisional Application No. 60/080,536, filed Apr. 3, 1998 and incorporated herein by reference in its entirety.

This application is a continuation-in-part of

U.S. patent applications Ser. No. 09/105,730, filed Jun. 26, 1998, Ser. No. 09/151,425, filed Sep. 11, 1998 now U.S. Pat. No. 6,167,088, and Ser. No. 09/196,072, filed Nov. 19, 1998, all of which are incorporated herein be reference in their entireties.

The invention relates to information compression systems generally and, more particularly, the invention relates to a method and apparatus for adapting a video information encoding system according to video source formatting and content parameters and encoded video formatting parameters.

US-CL-CURRENT: **375/240.12**, 348/415.1

ABSTRACT:

A method and apparatus for encoding, illustratively, a video information stream to produce an encoded information stream according to a group of frames (GOF) information structure where the GOF structure and, optionally, a bit budget are modified in response to, respectively, information discontinuities and the presence of redundant information in the video information stream (due to, e.g., 3:2 pull-down processing).

19 Claims, 18 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 12

---------- KWIC ---------

Detailed Description Text - DETX (102):
At optional step 620, the blocks in the frame are classified in terms of low activity or high activity in view of the M-ary pyramid. In the preferred embodiment, the "classification block size" is a 8.times.8 block having 64 M-ary pixel values represented by 128 bits. An "activity threshold" of 25 is set where the 8.times.8 block is classified as a high activity block if 25 or more pixel values are nonzero. Otherwise, the 8.times.8 block is classified as a low activity block. Additional higher block classification can be performed, e.g., classifying a macroblock as either a high activity or low activity macroblock. In the preferred embodiment, a macroblock comprising at least one sub-block that is classified as high activity, causes the macroblock to be classified as high activity as well. It should be understood that the "classification **block size**" and the "activity threshold" can be **adjusted** according to a particular application and are not limited to those values selected in the preferred embodiment. The method 600 then proceeds to optional step 630.

Detailed Description Text - DETX (150):
where: M.sub.j is an M-ary pyramid of level J; **WIDTH is the width** of the M-ary pyramid; **HEIGHT is the height** of the M-ary

pyramid; BLK.sub.13 **WIDTH is the width** of a pixel **block** within the M-ary pyramid; N is the number of bits per pixel; N.sub.13 OVERLAP.sub.13 L is he number of pixels to overlap on the left side of a **block** while packing; N.sub.13 OVERLAP.sub.13 R is he number of pixels to overlap on the right side of a **block** while packing; WORDSIZE is the size of the data type (in bits) into which the **block** is to be packed; and N.sub.13 UNUSED.sub.13 BITS is the number of unused bits in a packed data representation of a data type having a size of WORDSIZE.

Current US Original Classification - CCOR (1):
375/240.12

indicates the
highlighting of various phases depending on the
position of t

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TITLE: TELEVISION RECEIVER EQUIPPED WITH MULTISCREEN DISPLAY FUNCTION

PUBN-DATE: December 15, 1992

INVENTOR-INFORMATION:
NAME

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SHARP CORP N/A

APPL-NO: JP03166353

APPL-DATE: June 10, 1991

INT-CL (IPC): H04N005/45

ABSTRACT:

PURPOSE: To enhance the quality of multiscreen **display by changing** the shape of a frame that **partitions** the main screen from the

subordinate screen for type
of input video signal and by using the user control
to **change the size of the**
partitioning frame.

CONSTITUTION: A user control signal to be
supplied from an input terminmal 3
is supplied to a system controller C. The
controller C, in accordance with the
content of the control instructed by the user,
supplies a frame data selecting
signal to a ROM.R and a changeover signal to a
signal selecting switch SW.
From the ROM.R, based on the user's instruction, in
accordance with a select
signal supplied from the controller C for frame
data based on the user's
instruction, supplies predetermined frame data to
the switch SW. A signal that
is selected by the switch SW is converted by a RGB
decoder into a R, G, B
signal, and is displayed in the subordinate screen
enclosed by a frame in the
main screen of display T. In order to switch the
input image signal, the size
of the fame is changed in steps to inform the
receiver of the changeover of the
input video signal.